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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,973	08/10/2006	Yuji Fujimori	294602US0PCT	4631
22850	7590	10/30/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
OH, TAYLOR V				
ART UNIT		PAPER NUMBER		
1625				
NOTIFICATION DATE		DELIVERY MODE		
10/30/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/588,973

Applicant(s)

FUJIMORI ET AL.

Examiner

Taylor Victor Oh

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 14-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-85/86)
Paper No(s)/Mail Date 3.6/08 & 1.07 & 11.08/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: _____

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The Status of Claims:

Claims 1-18 are pending.

Claims 1-8 and 10-13 are rejected.

Claims 9 and 14-18 are withdrawn from consideration.

DETAILED ACTION

1. Claims 1-8 and 10-13 are under consideration in this Office Action.

Priority

2. It is noted that this application is a 371 of PCT/JP05/01804 (02/08/05), which has foreign priority documents, Japan 2004-033256(02/10/04) and Japan 2004-033276 (02/10/04) and Japan 2004-233287(08/10/2004) .

Drawings

3. None.

Election/Restriction

Applicant's election with traverse of Group I (claims 1-8 and 10-13) on 10/10/08 is acknowledged.

Claims 9 and 14-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group II, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4,7-8, 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated clearly by Frampton (US 3,969,274).

Frampton discloses the following example (see col. 9 ,lines 1-32):

60.72 g of extruded $\frac{1}{8}$ inch diameter and about $\frac{1}{4}$ inch long ID silica xerogel having a specific surface area of 300 m²/g and a pore volume of 0.45 cc/g (SMR 7-3741; Davison Chemical Co.) was placed in a glass liner which was then placed in a 250 ml Magna-Dash stainless steel autoclave. 10 ml of liquid water was placed in the autoclave outside the liner and the autoclave was closed. The reactor was then heated to 280° C. and held there under the autogeneous steam pressure developed for 17 hours, after which the autoclave was cooled to ambient temperature, the extrudate removed and vacuum dried at 100° C. for 2.5 hours. The final weight of the xerogel extrudate was 58.21 g.

A catalyst was prepared containing 1% Pd and 0.5% Au using an aqueous alkaline formaldehyde solution to reduce the palladium and gold to the metals. 30 ml of the catalyst were treated with 20 ml of a solution prepared by diluting 2.57 g of 85% H₃PO₄ to 20 ml, and then dried on a rotating glass dish under a stream of hot air to produce the final catalyst.

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The 30 ml of final catalyst was placed in a reactor and used to catalytically oxidize propylene to acrylic acid at 195° C. at atmospheric pressure using a mixed gas composed of propylene at a feed rate of 10 cc/min, air at a feed rate of 178 cc/min and water vapor at a feed rate of 160 cc/min, the latter being achieved by passing the air and propylene mixture through water at 80° C. After a run of 28 hours, acrylic acid was produced at a rate of 24.8 mmol/liter catalyst/hour.

The resulting xerogel is characterized by:

Martin diameter:	0.5-25.0 mm, preferably 2.0-5.0 mm
Bulk density:	0.35-0.75 g/cc, preferably 0.42-0.70 g/cc
Pore volume:	0.40-2.2 ml/g, preferably 0.44-1.15 ml/g
BET surface area:	20-800 m ² /g
Average crush strength (dry) of 50 particles:	>4 pounds
Mechanically stable to aqueous solutions and steam to 350°C.	

(see col. 4 ,lines 30-39)

This is identical with the claims.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of

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35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35

U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-8 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable Frampton (US 3,969,274).

Frampton discloses the following example (see col. 9, lines 1-32):

60.72 g of extruded $\frac{1}{8}$ inch diameter and about $\frac{1}{4}$ inch long ID silica xerogel having a specific surface area of 300 m²/g and a pore volume of 0.45 cc/g (SMR 7-3741; Davison Chemical Co.) was placed in a glass liner which was then placed in a 250 ml Magna-Dash stainless steel autoclave. 10 ml of liquid water was placed in the autoclave outside the liner and the autoclave was closed. The reactor was then heated to 280° C. and held there under the autogeneous steam pressure developed for 17 hours, after which the autoclave was cooled to ambient temperature, the extrudate removed and vacuum dried at 100° C. for 2.5 hours. The final weight of the xerogel extrudate was 58.21 g.

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The 30 ml of final catalyst was placed in a reactor and used to catalytically oxidize propylene to acrylic acid at 195° C. at atmospheric pressure using a mixed gas composed of propylene at a feed rate of 10 cc/min, air at a feed rate of 178 cc/min and water vapor at a feed rate of 160 cc/min, the latter being achieved by passing the air and propylene mixture through water at 80° C. After a run of 28 hours, acrylic acid was produced at a rate of 24.8 mmol/liter catalyst/hour.

The resulting xerogel is characterized by:

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Pore volume:	0.40–2.2 ml/g, preferably 0.44–1.15 ml/g
BET surface area:	20–800 m ² /g
Average crush strength (dry) of 50 particles:	>4 pounds
Mechanically stable to aqueous solutions and steam to 350°C.	

(see col. 4, lines 30–39)

The instant invention, however, differs from the prior art in that the pore volume of the mesopore having a pore size of from 2 nm through 50 nm of the carrier is unspecified.

With respect to the lack of teaching the pore volume of the mesopore having a pore size, it is well-known in the case law that the selection of a particle size is not a patentable modification in the absence of unobvious results.

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In re Rose, 105 USPQ 237(CCPA 1955) ; therefore, it would have been obvious to the skilled artisan in the art to be motivated to conduct the routine experimentation on the pore volume of the mesopore having a particular pore size in order to optimize the characteristics of the carrier in the catalyst composition. This is because such a practice can be performed by the skilled artisan in the art routinely.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Taylor Victor Oh, MSD,LAC
Primary Examiner
Art Unit :1625

/Taylor Victor Oh/
Primary Examiner, Art Unit 1625
10/27/08